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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,547	12/24/2001	David G. Hostetter	2001-087-ICE	9585

7590

01/13/2006

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EXAMINER

ALI, SYED J

ART UNIT

PAPER NUMBER

2195

DATE MAILED: 01/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action  
Before the Filing of an Appeal Brief**

Application No. 10/026,547	Applicant(s) HOSTETTER ET AL.	
Examiner Syed J. Ali	Art Unit 2195	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 19 December 2005 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.  
b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☒ Applicant's reply has overcome the following rejection(s): See Continuation Sheet.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: None.

Claim(s) objected to: None.

Claim(s) rejected: 1-42.

Claim(s) withdrawn from consideration: None.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). \_\_\_\_\_.  
13. ☐ Other: \_\_\_\_\_.

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TECHNOLOGY CENTER 2195

Continuation of 5. Applicant's reply has overcome the following rejection(s): Rejection of claims 1, 15, 29, and 33 under 35 USC 112, 2nd paragraph pertaining to the value of the "synchronicity setting" (pg. 4 of the Final Rejection, numbered paragraph 5b, is hereby withdrawn).

Continuation of 11. does NOT place the application in condition for allowance because: Applicant argues that Sicola does not teach "specifying a particular level of lag, said particular level of lag being a specified synchronicity setting". On page 11 of the present remarks, Applicant indicates that the cited passage of Sicola does not specify a lag. However, Applicant has failed to give any sort of explanation as to how the claimed level of lag is specified. This very point has formed the basis of the indefiniteness rejection based on this limitation. Examiner has been unable to determine how the claimed level of lag is specified, yet Applicant believes that this is simply a broad term and should be treated as such. Subsequently, Applicant seeks to place narrow interpretation on this term. Examiner has identified a portion of Sicola that teaches a specified level of lag, and it is noted that there is no explicit step of "specifying" the level of lag in Sicola. However, Examiner will treat this term broadly, as Applicant has suggested on pages 8-9 of the present arguments. Accordingly, any conceivable measure of deriving such a lag meets the broad reading of "specifying". If Applicant intends a more specific interpretation of the claim term, it should be identified, as has been urged in the indefiniteness rejection.

Applicant has also argued that Sicola's teaching of a remote copy lagging behind by a "bounded number of write I/O operations" is not a synchronicity setting, i.e. the number is not the same as a synchronicity setting. Applicant has reached into other portions of Sicola that use the term "bound" in order to apply a meaning to "bounded" that is completely inconsistent with how it is used in the context of column 11. Applicant seeks to place a meaning of "a number of connected or grouped write I/O operations." In other words, the term "bounded" is used as an adjective to modify "write I/O operations" rather than "number". This interpretation ignores the fact that this portion of Sicola is dealing with the rate of I/O operations (col. 12 lines 5-17) and not the form of the I/O operations. Applicant is also advised that the specification is not the only source for defining terms in the specification. This is the method to be used by the courts in claim construction analysis, but has no basis in limiting the written description. A well-known definition of "bounded", and one that is perfectly consistent within the context of the cited passages of Sicola, is that of "identifying the limits of" or "confining to a limit". (definition retrieved from The American Heritage Dictionary of the English Language). Applying this meaning, it is abundantly clear that Sicola teaches the same type of synchronicity claimed by Applicant, as demonstrated by dependent claim 6, which describes the synchronicity setting as a number of commands.

Applicant also argues that Sicola teaches away from specifying a level of lag, as data in the distributed system will become synchronized over time. Applicant indicates that this statement by Sicola stands for the proposition that a synchronicity lag is not needed. However, this is simply a misunderstanding of the teachings of Sicola. Suppose there are two computing entities. If a command is entered on the first computing entity and relayed to the second, there will be a period of time during which the data is not synchronized. Moreover, since the rate at which the first entity can perform I/O exceeds the rate at which the second entity performs I/O, the number of data lines that are unsynchronized will be greater as the number of I/O commands increases. This is exactly the reason why a synchronicity setting is needed, as the first entity will perform its operations too fast and updates will be dropped at the second entity due to overload, bandwidth bottlenecks, etc. Applicant should recognize that the cited portion of Sicola is solving the same problem addressed by the claimed invention. That the computers will eventually be synchronized is a function of allowing the system to relay commands at a synchronized rate while ensuring that no data is dropped. At some future point in time, after I/O updates are complete at the first entity, the second entity will catch up.

Applicants other arguments, e.g. that Sicola doesn't teach controlling a level of lag, rely on the alleged deficiencies discussed above. Of course, if there is no synchronicity setting, it would be impossible to relay commands until the synchronicity setting is reached. However, as Applicant's concerns regarding this limitation have been addressed, the present argument is moot.

Finally, Applicant has attacked Examiner's provided suggestion for modifying Sicola to postpone sending additional commands once the synchronicity setting has been reached by discussing chariots. Nonetheless, Examiner reasserts the suggestion provided, with the following additional comment. Sicola teaches relaying commands to a remote system for replication and allowing the remote site to lag behind the primary site by a bounded number of I/O operations. First, the "bounded number of I/O operations" has been shown to mean essentially "a number of I/O operations that is less than or equal to another number". Should the remote site reach the maximum number of operations it is permitted to lag behind, there must be some way of preventing the number from exceeding the "bounded number." Examiner has essentially provided the reasoning why Sicola is silent on how to prevent this condition, i.e. it would have been obvious to a person having ordinary skill in the art that the best way to prevent such a condition is to cease sending additional commands until the amount of lag has decreased. In fact, this is the method often used in similar communication methods, i.e. a known technique of preventing packet-loss is to stop sending additional packets that would cause buffer overflow until the overflow condition is resolved. Sicola does not explicitly discuss this step because any person of ordinary skill in the art would recognize it as being obvious.